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From: Lombardi, Marc
Sent: Thur 7/6/2017 1:38:08 AM
Subject: Leviathan Mine - ICT Demonstration Update

Gary / Lynda,

On Behalf of Atlantic Richfield, Amec Foster Wheeler is providing the following update for the ICT Demonstration.

Today we began transferring water from the Upper Ponds to Pond 4 and are mixing it with the CUD/DS water in Pond 4. We anticipate the water transfer and mixing will take approximately one day. Once Pond 4 has reached the target acidity (2,600 – 2,900 mg/L), the HDS Treatment Plant will begin treating the combined waters at a low flow rate. The HDS Treatment Plant will ramp up to the target operating flow rate of 143 gpm over the course of a few days (estimated July 6-10). We anticipate to begin treatment operations at a rate of 143 gpm on Monday or Tuesday, July 10/11, 2017. Once the HDS Treatment Plant is operating in a steady mode at the 143 gpm, the official "30-day demonstration period" will begin.

During the 30-day demonstration period, we will be transferring water from the Upper Ponds at a relatively steady rate throughout the duration of the test. The current blending ratio between the Upper Pond water and CUD/DS flows achieves an influent acidity of 3,300 mg/L, which is higher than the target range of 2,600 – 2,900 mg/L. As the test progress, we anticipate CUD/DS flow rates will continue to decrease as we continue into the dry season, and the acidity in the Upper Ponds will to continue to increase due to evapoconcentration, meaning the influent acidity will likely increase beyond 3,300 mg/L.

We plan to use Pond 4 as a mixing and storage reservoir. Pond 4 will be almost full at the beginning of the test. We will reduce the Upper Pond flow rate over the course of 30 days, and allow the Pond 4 water level to drop, ending at a Pond 4 water level of approximately four feet. By transferring less Upper Pond water, the influent acidity into the HDS Treatment Plant would be reduced to approximately 3,150 mg/L at the start of

the demonstration, which is still higher than the target influent acidity of 2,600 – 2,900 mg/L. The influent acidity will also likely increase throughout the test due to factors noted above.

To better achieve the target acidity range of 2,600 – 2,900 mg/L, we are also considering the use of a relatively small flow of water diverted from Leviathan Creek into Pond 4 as a source of dilution. The diversion would occur consistent with the LRWQCB's Statement of Water Diversion and Use, which it first submitted to the State Water Resources Control Board Division of Water Rights in June 2000. The same apparatus used by the LRWQCB each year to divert water out of Leviathan Creek near SW-01 (upstream of the site) into a holding tank near Pond 1 for its treatment operations would be used here. A valved hose or pipeline would be used to route the water from the Pond 1 holding tank to Pond 4 via gravity feed. We believe a flow of approximately 20 gpm would be sufficient to maintain the target influent acidity of 2,600 – 2,900 mg/L in Pond 4.

We will provide weekly updates as the ICT Demonstration progresses. Please let us know if you have any related questions.

Thanks,

Marc

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